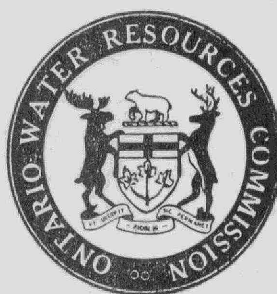


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THE
ONTARIO WATER RESOURCES
COMMISSION
FUNCTIONS OF THE VARIOUS
DIVISIONS, BRANCHES AND OFFICES



PREPARED BY:

OFFICE OF THE GENERAL MANAGER

OCTOBER 1964.

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ONTARIO WATER RESOURCES COMMISSION

**FUNCTIONS OF THE VARIOUS
DIVISIONS, BRANCHES AND OFFICES**

**Prepared By:
Office of the General Manager
October 1964.**

OFFICE OF THE GENERAL MANAGER

General Manager -	D.S. Caverly
Assistant General Manager (Water Resources) -	G.M. Galimbert
Assistant General Manager (Projects) -	L.E. Owers
Assistant to the General Manager -	L.M. Tobias

The General Manager is responsible for the direct administration of the Commission as a whole, including its programs and all staff activities. He is assisted in this work by two Assistant General Managers, one of whom is responsible for the supervision and co-ordination of the work of the Divisions of Water Resources, Sanitary Engineering and Laboratories, the other being responsible for the Divisions of Construction, Plant Operations and Project Development.

In addition to the above, there is an Assistant to the General Manager who handles many of the Administrative details of the General Manager's Office.

OFFICE OF THE COMMISSION SECRETARY

Commission Secretary -

W.S. MacDonnell

The Commission Secretary's responsibility includes the handling of official correspondence and documents of the Commission, the preparation of agenda for Commission meetings, the recording, keeping and certifying of Commission meeting minutes, officiating at the opening of tenders, the administration of the Commission Office Services and other related activities.

OFFICE SERVICES BRANCH

The Office Services of the Commission come under the jurisdiction of the Commission Secretary. The Branch consists of the following services:

(1) Files Section which maintains a filing and microfilm system for all Commission correspondence, reports, certificates and plans;

(2) Stenographic Pool which provides stenographic services as required within the Commission;

(3) Mail and Stores which handles the daily mail, and the requisition, storage and distribution of office supplies;

(4) Print Shop which handles the printing of OWRC publications, the duplication of typewritten materials etc.,

(5) Laboratory Maintenance which provides mechanical, electrical and other stationary maintenance services for the OWRC Laboratory building, carries out maintenance and repairs on Commission vehicles, fabricates certain mechanical and field equipment difficult to obtain and required by the various divisions of the Commission in their field and laboratory work, and makes repairs to such equipment as required.

(6) Laboratory Stores which maintains stores facilities for all laboratory materials and supplies;

(7) Library which provides library facilities for the use of the Commission staff.

PROJECT DEVELOPMENT DIVISION

The function of the Project Development Division is to facilitate the development of OWRC financed water and sewage works and pipe line projects. By means of this centralized group, each step in the sequence of development is correctly followed and any delay in the development of a project is kept to a minimum.

A more detailed description of the activities of the two sections of the division, Project Control Section and Property Branch, follows.

PROJECT CONTROL SECTION

Supervisor -

P.G. Cockburn

The following is an outline of the activities of the Project Control Section:

(1) The development of new OWRC financed water and sewage works projects, involving meetings with municipal representatives and consulting engineers, correspondence and follow up.

(2) The presentation of requests for OWRC projects to the Commission members, involving a general review of proposed financing, and the submission of related municipal data. Requests for Orders in Council and preparation of relevant material.

(3) Collaboration with municipalities on the development of financing proposals, involving meetings, correspondence and the preparation of related documents, including agreements for ratification by municipal Councils.

(4) Preliminary submissions to the Ontario Municipal Board, involving the presentation of the material referred to in item 3 and including the preparation of necessary advertisements and by-laws and presentations during OMB hearings.

(5) Maintaining liaison between municipalities and the OMB, involving correspondence and participation in meetings.

(6) Final submissions to the Ontario Municipal Board, involving restatements based on tendered prices and the recommendations of consulting engineers.

(7) Negotiations and discussions with municipalities if complications arise, and resubmissions to the OMB.

(8) Provision of information to other Commission personnel and the maintenance of records and progress reports.

PROPERTY BRANCH

Chief Property Agent -

H.H. Mitchell

The basic responsibility of the Property Branch is the acquisition of property (both freehold and easements) for Commission projects. The following are the duties undertaken in relation to this basic function.

- (1) Instruction of Ontario Land Surveyors and supervision of their work.
- (2) Instruction of local solicitors in conveyancing work and supervision of the mechanics of conveyancing.
- (3) Preparation of legal documents in projects where there are many properties, to reduce legal costs to the Municipality.
- (4) The checking, recording and filing of all legal documents.
- (5) The maintaining of a register of all properties required, with details of all transactions.
- (6) Registry office and titles searching work.
- (7) Preparation of lagoon property reports for public hearings.
- (8) Preparation of appraisal reports for many properties.
- (9) Negotiation of changes in engineering layout with consultants where proposals are impracticable from a property standpoint.
- (10) Selection of test drilling sites in connection with the Ground Water Division.
- (11) Assessing and settling of damage claims for crops and property damage.

(12) The carrying out of arbitrations on certain expropriations which includes preparation of Commission appraisal reports, instruction of solicitors and appraisors in the presentation of each case, obtaining expert witnesses, arranging details of hearings, checking and co-ordinating evidence appraisals and procedures, giving of evidence as required and the implementing of award.

In addition to the above duties which are directly related to the main function of the Branch, the following additional duties are carried out: - checking the assessments and property tax against all Commission properties, conducting assessment appeals where necessary and approving payments, checking and approving accounts for property matters, maintaining a register of leased property and approving annual payments, leasing and selling Commission property, preparing statistical and other reports from time to time for the information of the Commissioners, and giving advice to municipalities on Real Estate problems in general.

PERSONNEL BRANCH

Personnel Director -
Personnel Officer -

A.R.W. Uren
H.W. Tonkin

The Personnel Branch has the responsibility of supervising and co-ordinating the program of personnel administration.

Recruiting of engineering, scientific, technical, secretarial and clerical staff for Head Office involves maintaining contact with the National Employment Service, the principal universities of Ontario and other Ontario and Canadian institutions, corresponding with British and foreign professional personnel and conducting interviews in the field and at Head Office.

Recruiting of operators, electricians, mechanics etc. for Plant Operations staff involves preparing and placing all advertising and job postings, participation in selection and assuming a leading part in difficult discussions with Municipal Councils and Local Advisory Committees.

The Branch participates in the development of overall personnel policy and regulations and interprets Commission policy to staff. Supervisors are advised on employee relations procedures and the handling of staff disciplinary problems.

Assistance with the development and training of personnel is given and a program of financial assistance co-ordinated.

A salary administration program is carried out together with a continuous review of the Ontario Government classification program; recommendations are made to the Commission as conditions change. Wage and salary surveys provide up to date information for maintenance of plant staff salaries at community levels.

The monthly appointment list for head office and plant staff is prepared and records are maintained to meet the requirements of the Provincial Treasurer, the Provincial Auditor and the Commission.

Liaison with the Public Service Superannuation Board and co-ordination of the Workmen's Compensation Board programs, the OWRC medical-surgical health plan, the legal requirements of the Ontario Hospital Services Commission, and the Ontario Municipal Employees Retirement Program are also handled by the Personnel Branch.

LEGAL DEPARTMENT

Senior Solicitor -
Solicitor -

H. Landis
A. Hermant

The work of the Legal Department may be summarized as follows:

(a) Advising on and drafting of legislative amendments, contracts and agreements, regulations, standard property and construction forms, and administrative procedures of the Commission.

(b) The negotiation and settlement of claims by and against the Commission of contractors, bond companies, trustees in bankruptcy and others.

(c) Preparation for and supervision of civil litigation, prosecutions and arbitrations.

(d) Research - for the publication of articles and for the Uniform Bond Procedure Committee.

(e) Assisting in negotiations with others, such as Central Mortgage and Housing Corporation, municipalities, Dept. of Lands and Forests.

(f) Advising generally and giving lectures in connection with all matters involving the legal aspects of the Commission's work.

INFORMATION BRANCH

Information Officer -

John C. Scott

The main activity of the Information Branch is, as the name implies, dissemination of information to the general public concerning the Commission and its activities through distribution of a news release service to various media, such as newspapers, TV and radio, trade publications and any other available media. Also involved in this is individual attention paid to numerous enquiries received by mail, telephone and personal calls at the office.

Further, members of the Ontario Legislature are kept informed by personal mail of OWRC-municipal project activities in their constituencies, and of general OWRC activities through their inclusion on the news release address list.

Other activities include the organization of OWRC project official opening ceremonies and any attendant student education programs which may be scheduled along with such ceremonies; the preparation and placing of all OWRC display advertisements and the placing of tender call advertisements; the handling of OWRC exhibits, particularly the Commission's annual display at the Canadian National Exhibition; the preparation and publication of OWRC annual reports; the preparation of copy and layouts for various published items such as booklets, pamphlets, brochures, etc; the handling of distribution of all OWRC publications including those for which there is a charge; the preparation of material for special articles, speeches, etc., as required; the operation of a photographic and slide service and files; and publication of the staff-orientated OWRC news.

DIVISION OF SANITARY ENGINEERING

Director -	K.H. Sharpe
Assistant Director & Supervisor of Sewage Works -	J.R. Barr
Supervisor of Water Works -	G.R. Trewin
Supervisor of Field Activities -	G.H. Kay
Supervisor of Stream Sanitation -	W.A. Steggles
Supervisor of Plumbing -	P. Spenst
Assistant Supervisor Design Approvals -	A.R. Townshend

The Division of Sanitary Engineering has the following area of responsibility:

(a) The supervision and inspection on a routine basis, of all the water works and sewage works in the Province, including those operated by the Commission.

(b) The examination of all plans and specifications for the construction of all new water works and sewage works in the Province, as well as all alterations and extensions.

(c) The promotion of new water and sewage works projects, involving meeting with municipal representatives, correspondence and follow up.

(d) The provision of preliminary feasibility reports for smaller municipalities contemplating the installation of water supply and sewage systems.

(e) The carrying out of stream surveys to ensure satisfactory conditions. This stream sampling program is set up to cover all major and pertinent rivers at least once a year. Pollution surveys in which all outfalls to water-courses are located and sampled are also an important part of the Division's pollution control work.

(f) The programming and supervision of courses provided by the OWRC staff for water works and sewage works operators.

(g) The review of subdivision plans for the provision of adequate sewage disposal and water supply facilities which have been submitted through the Department of Municipal Affairs.

(h) The supervision of the plumbing regulations in the Province and the development of technical programs for the control of plumbing.

(i) The investigation of complaints concerning pollution and water supply.

(j) The conducting of water resources and pollution surveys on an area or watershed basis.

(k) The investigation of special problems concerning water supply and pollution control.

The Division of Sanitary Engineering is responsible for programs related to water supply and pollution control that were formerly under the Provincial Department of Health. It has engineers with post graduate training and technicians experienced in this field which enables them to carry out this program.

DIVISION OF CONSTRUCTION

Director -	A.W. Shattuck
Assistant Director -	J.C.F. Macdonald
Supervisor -	W.A.S. Marshall
Supervisor -	C.J.K. Wilson

The Division of Construction is responsible for administering the Commission's contracts with consulting engineers and contractors.

The Preliminary Agreements with municipalities give the Commission authority to enter into agreements with consulting engineers to prepare plans and specifications and to call for tenders.

On projects involving sewage treatment plants, lagoons and water treatment plants, pre-design meetings are held as soon as consultants have prepared rough sketches and have made preliminary design calculations. These meetings are attended by representatives of the consultants and the different branches of the Commission. The topics discussed at these meetings include capacity, degree and type of treatment, choice of equipment and pre-selection of equipment, plant flexibility, choice of pumps and the necessary approvals from the Department of Labour and the railways etc. In the case of lagoons, the size, slope and width of berms and protection against erosion are discussed.

When Consulting Engineers have not previously carried out work for the Commission, a copy of Information for Consulting Engineers is provided at pre-design meetings and Commission requirements are reviewed in some detail.

Early in the negotiations of a new project the divisional staff set up a Municipal Officials Liaison Group known as the Local Advisory Committee. Meetings are held prior to and during construction to make all necessary arrangements for a minimum of inconvenience to local residents.

The Division of Construction, in its review of plans and specifications, is particularly concerned with the specifications and form of tender. A thorough check is made and a list of deficiencies is prepared and sent to the consulting engineer so that he may make corrections prior to the calling of tenders.

An engineer in the Division of Construction, who has been assigned a project, is directly responsible to see that both the consultant and the contractor perform their work satisfactorily. Each engineer visits his projects regularly and submits inspection reports on the progress of the work.

All progress payments to contractors are prepared by the consulting engineers and sent to the Division of Construction where they are checked before being submitted to the Accounts Section for payment.

DIVISION OF PLANT OPERATIONS

Director -	B.C. Palmer
Assistant Director -	C.W. Perry
Regional Supervisors -	A.C. Beattie
	D.A. McTavish

The Division of Plant Operations is responsible for the operation and maintenance of water and sewage works financed and built by the OWRC. This is carried out by a headquarters staff of engineers, technicians and clerical help and a field staff of plant operators, who report to a Regional Operations Engineer.

The steps involved in developing the operating program of a project are as follows:

(1) The engineering design is reviewed with the consultants, the sanitary engineering and construction divisions and any other supporting groups such as the industrial wastes or ground water branches.

(2) Prior to the commencement of operation, engineers from this Division meet with the Local Advisory Committee to discuss staffing requirements, the operating budget and other problems associated with the startup of the works. The Personnel Officers of the Commission secure suitable candidates for the operating positions. Their qualifications are reviewed by the Operations Engineers and the Local Advisory Committee and selections made.

(3) The Local Advisory Committee meets as frequently as necessary to review operating budgets and expense statements, rates of pay for operating staff and the need for major repairs or alterations, to assist in the selection of personnel, and to make recommendations on any matters pertinent to the operation of the project.

The detailed supervision of OWRC water and sewage works projects is carried out by a divisional staff of engineers. The province is divided into geographic regions with each being the responsibility of an Operations Engineer and his assistants. Actual operation of the works is done by local plant operators who are on OWRC payroll and are directly responsible to the Operations Engineer for their region.

The head office organization also includes a staff of electrical/mechanical and controls technicians who establish and supervise a program of preventive maintenance for equipment at all OWRC projects. Assistance is given to the project operating staff in making repairs after an emergency breakdown.

In conjunction with the Purchasing Section of the Finance Division, the supply of all project needs is coordinated. This includes expendable maintenance items such as lubricants and cleaning materials, the purchase or replacement of small tools and items of equipment. The Supply Section is also responsible for inventory control for all project owned goods and materials.

A clerical staff, in addition to providing secretarial and stenographic service to head office, includes personnel responsible for the maintenance of statistical data concerning OWRC projects together with the analysis of cost information.

Annual reports on all projects where full time staff are employed are prepared by the Division and submitted to the municipality.

A program of operator training is provided both on the techniques and methods of sewage and water plant operation together with safety of personnel and equipment.

Overall divisional supervision is provided by the Director, Assistant Director and two Regional Supervisors.

DIVISION OF WATER RESOURCES

Director -	A.K. Watt
Assistant Director & Supervisor of Surface Water Branch -	K.E. Symons
Supervisor of Ground Water Branch -	D.N. Jeffs

The Division of Water Resources has the following responsibilities in the water works field:

- (a) The carrying out of a program of water resources management by means of a permit system. This includes the inspection and control of interference resulting from the taking of water from both ground and surface sources.
- (b) The conducting of water resources surveys and investigation programs in which hydrogeologic surveys are undertaken for municipalities and test drilling and well construction programs are carried out.
- (c) The assembling of hydrometric data through the installation of stream flow gauging stations and direct metering. Basic hydrologic data are assembled from field surveys, well records supplied by drilling and boring contractors, and from observation wells.
- (d) The licensing of all contractors engaged in the business of boring and drilling for water.
- (e) Co-operating with the ARDA authorities in carrying out water resources research studies on river basins.

The work of the Division of Water Resources has to do basically with the assessment, development and control of ground and surface water resources. The staff includes geologists and engineers with training in hydrology.

DIVISION OF LABORATORIES

Director -	F.A. Voegel
Assistant Director & Supervisor of Industrial Wastes Branch -	R.H. Millett
Supervisor of Purification Processes Branch -	J.G. Duncan
Supervisor of Chemistry Branch -	C.E. Simpson
Supervisor of Biology Branch -	J.H. Neil
Supervisor of Bacteriology Branch -	L.T. Vlassoff

The services provided by the Division of Laboratories concern, for the most part, analytical, investigative and research data on samples of water, sewage and industrial wastes. This program is carried on through a number of branches.

The Bacteriological Branch is concerned with the bacteriological analysis of water and sewage samples. In the routine water pollution work, samples from OWRC field staff, from water and sewage treatment plants, and from other agencies and private citizens are analyzed for the presence of coliform bacteria. Sliming problems in streams, iron organisms in water distribution systems, in wells and water treatment plants, taste and odour producing bacteria are typical examples of special investigations that are dealt with by this Branch.

In the Biology Branch, algae counting and the identification of miscellaneous organisms which are submitted constitute most of the work of a routine nature. Stream bed studies are carried out to determine the effects of pollution, and fish kills are investigated where there is suspected toxic water. Bio-assay studies are done in co-operation with the Industrial Wastes Branch to determine the toxicity of complex industrial wastes. Apart from the work that is done in co-operation with other branches and divisions, the Biology Branch initiates and carries out certain investigations independently. An example of this has been the studies which have been made on the nuisance created by the algae *Cladophora*, providing information on its life history and effective algicides. In connection with the latter, the Branch in 1962 developed a permit system whereby the Commission regulates the use of chemicals applied to control aquatic nuisances in public waters.

The function of the Chemistry Branch is largely that of analysis, some 26,000 analyses being carried out each year. The Water Section performs analysis of the mineral quality of waters, providing information on their suitability for use by households, municipalities and industries. In the Sewage Section, examination of samples collected from polluted waters and from sources of waste water form the major portion of the chemical laboratory's routine work. Analytical reports as to the identity and amount of chemical materials producing or associated with pollution provide basic information with which to evaluate and recommend remedial treatment. The Industrial Waste Section of the Chemistry Branch performs more specific identifications of pollutants. These are required on samples collected from industrial effluents. Analyses performed include tests for toxic metals, the extraction and identification of oil contaminants and the determination of phenols, sulphides and other materials capable of imparting objectionable tastes to water.

The Industrial Wastes Branch undertakes the investigation of industrial wastes as sources of stream pollution and recommends measures to control harmful discharges to sewers and watercourses. In addition to this, the Branch supervises the waste treatment facilities of industries. Industrial wastes are complex in nature and the methods of treatment are often not well established. It is the policy of the Branch to give every assistance to industry in solving its problems in this field. Technical advice is also given to municipalities in the planning and operation of municipal sewage treatment plants with respect to the handling of industrial wastes. With the increasing need for efficient utilization and reuse of industrial water, the importance of the role of the Industrial Wastes Branch in the field of industrial pollution control cannot be too highly emphasized.

The work of the Purification Processes Branch includes a number of investigations such as the rate of oxygen absorption for a number of mechanical aerators, the use of diatomite filters for municipal water supplies as well as others. New processes are analyzed by this Branch, for example the use of micro-strainers in the primary treatment of water. Some work has been done on oxidation ponds and the use of aerated lagoons is being studied. Technical assistance is also given by the Branch to many of our water treatment plants in problems relating to coagulation, taste and odour, and the use of chemicals such as activated carbon and coagulant aids.

RESEARCH DIVISION

Director -

A.J. Harris

The Division of Research is responsible for carrying out applied research into a broad spectrum of water resource topics concerned with the quality, supply, and purification of water, in addition to the biological and chemical hazards, control, and treatment of sewage and industrial wastewaters. The program gives preference to investigation of problems currently before the Commission.

With the inception of the Division of Research as a unified identity in 1963, a number of research projects already inaugurated became co-ordinated under one responsibility. Programs involving laboratory bench tests and studies, field evaluations, pilot plant projects, equipment development, literature searches, and report writing are scheduled by this division.

Among the current projects under research study by the division is the control of the nuisance algal growths of *Cladophora* in the Great Lakes. Studies currently stress aspects of mechanical removal and growth inhibition by chemical treatment, but more fundamental investigations are also being used to seek the causes of this algae's unusual environmental pre-eminence. Another topic is the evaluation of "oxidation ditches" as a potentially more economic variation of sewage treatment for some municipalities, while still another important study has begun on "tertiary treatment lagoons" for effecting quality improvement of sewage treatment plant effluents through the removal of soluble substances not completely removed by the latter treatment. Other current topics include: studies of the nature, concentration, and toxicity of the organic components in sewage sludge; the performance of sludge digestors and sludge dewatering techniques; an evaluation of waste stabilization ponds in Ontario; a survey of supplementary aeration devices for stabilization ponds; standardization of pulp fibre sampling techniques; and co-operative water basin research to determine the effect of various soil vegetations on ground water levels.

Projects being considered for future study may stress needed improvements in the solution of major industrial

waste problems as they occur in excessive discharges of phosphate, organic colloid, and toxic metal contaminants released from industrial sewers. Interest is also high towards study of the major taste and odour problems in municipal water supply. An evaluation of a water quality data processing system may also prove desirable.

FINANCE DIVISION

Comptroller -	D.A. Joynt
Assistant Comptroller -	E.F. Heath
Chief Accountant -	A.J. Cox
Contract Payments -	T. Beall
Payroll -	W. Glover
Purchasing -	C.D. Groom
Accounts Payable -	O. Bernard

The Finance Division is concerned with the financial affairs of the Commission. This includes financial planning, the development and implementation of financial controls, the formulation of accounting policy and the preparation of required financial statements. This Division is further responsible for the banking and custody of the Commission's monies and securities, the procurement and protection of assets, the collection of payments due from municipalities, and the provision of insurance.

More specifically, the responsibilities of the Finance Division are as follows:

(a) The establishing, co-ordinating and administering of an adequate plan for the provision of funds and the control of operations, based upon a comprehensive system of Estimates, Budget Reporting and Forecasts.

(b) The administering of the accounting function of the Commission, together with the methods and systems embracing the design, installation and custody of all accounting books, records and forms throughout the Commission.

(c) The maintaining of banking arrangements, receiving, having custody of and disbursing the Commission's monies. The Comptroller reports to the Investment Committee on the funds available for investment and provides for the custody of the securities purchased.

(d) Protecting the assets of the OWRC through maintaining effective internal control. The auditing of all financial and business records and all receipts and disbursements of the Commission, including all books and accounts of all officers and agents of the Commission who are charged with the receipt and disbursement of money or materials, or who have jurisdiction over labour.

(e) The collection of accounts due the Commission and assisting with the development of special arrangements when required. Also the collection and control of revenues from the sale of licences, publications, etc.

(f) Providing insurance coverage to adequately and properly safeguard the employees, business and property of the Commission, including fidelity bonds, travel accident insurance, legal liability insurance, automobile insurance and project insurance.

(g) The preparation and interpretation of the financial statements and reports of the Commission, comparing performance with operating plans and standards, and reporting and interpreting the results of operations to all levels of management.

(h) The provision of a central purchasing function for the entire Commission, for the procurement of both supplies and equipment used in the operations of the Commission and Commission projects and the development of purchasing programs in accordance with good business practice.

(i) The provision of special assistance to municipalities upon their request with regard to:-

- (1) Water utility accounting - establishing, improving or maintaining their particular systems;
- (2) Water and sewer rate structures.

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